

KULKA, MILAN

19 17
/ Economics of the production of radioisotopes in uranium
reactors. Pavel Kovanic and Milan Kulka (CSAV,
Prague). *Jaderna energie* 5, 227-32 (1960).—Radioiso-
topes can be produced in a reactor either internally, when
they affect the neutron balance unfavorably, or externally,
when they have no effect on the neutron balance. Different
factors affect the economics of production in the 2 cases.
The effect of the extent of burn-up, which in turn depends
on the reactor materials and dimensions, is considered, and
it is concluded that production of radioisotopes in reactors
using enriched fuel is economically more favorable than in
reactors using natural U. Other favorable factors are:
a removable reflector, a possibility of changing the shape
of the reactor core, a large reserve reactivity, and a large
free space around the core, either empty or filled with
water. The cost of producing 10^{19} available neutrons
(by taking into account fuel, amortization, and production
costs) is compared for various types of reactor. H.N.

KULKA, Milan, inz.

A czechoslovak, apparatus for continuous measurement of the concentration of radioactive aerosols. Tech prace 14 no.7: 572-573 J1 '62.

1. Tesla, Premysleni.

HADEK, V.; KULKA, M.

Contribution of beta and gamma radiation activity to total dose intensity of fission products. Chekhosl fiz zhurnal 14 no. 6:411-416 '64.

1. Institute of Macromolecular Chemistry, Czechoslovak Academy of Sciences, Prague 6, Na Petrinach (for Hadek).
2. Tesla Pardubice National Enterprise, Research Institute Premysleni (for Kulka).

KULKA, S.

The carrying capacity of railroads. p. 373. (PRZEGLAD KOLEJOWY, Vol. 5, No. 10, Oct. 1953, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

KULKA, S.

KULKA, S. The productive capacity of auxiliary workshops of the mechanical establishments of the railroad. (To be contd.) p. 298

Vol. 8, no. 8, Aug. 1956
PRZEGLAD KOLEJOWY
TECHNOLOGY
Warszawa, Poland

So: East European Accession, Vol. 6, no. 2, 1957

KULKA, S.

KULKA, S. Productive capacity of auxiliary workshops of the mechanical establishments of the railroad. p. 334

Vol. 8, no. 9, Sept. 1956

PRZEGLAD KOLEJOWY

TECHNOLOGY

Warszawa, Poland

So; East European Accession, Vol. 6, no. 2, 1957

KULKA, S.

KULKA, S. Calcula ting the idleness of rolling stock in repar. (T o be contd.) p. 408

Vol. 8, no. 11, Nov. 1956

PRZEGLAD KOLEJOWY

TECHNOLOGY

Warszawa, Poland

So: East European Accession, Vol, 6, no. 2, 1957

KULKA, S.

The productive capacity of auxiliary workshops of the mechanical establishments of the railroad. p.214
(PRZEGLAD KOLEJOWY, Vol. 9, No. 6, June 1957, Warsaw, Poland)

SO: Monthly List of East European Accessions (FEAL) LC, Vol. 6, No. 9 Sept. 1957, Uncl.

KULEA, W.

"The System of 'Buying and Selling' during a General Overhauling Must Be Changed." p. 271, (NOTORYZACJA, Vol. 9, No. 9, Sept. 1954. Warszawa, Poland.)

SO: Monthly List of East European Accessions, (EEAL), LC,
Vol. 3, No. 12, Dec. 1954, Uncl.

Kulkarni, P.; Chiplonkar, M.

Seasonal variation of twilight intensity. In English. p. 182.

BULLETIN OF THE ASTRONOMICAL INSTITUTES OF CZECHOSLOVAKIA, Praha, Czechoslovakia,
Vol. 10, no. 5, Sept. 1959.

Monthly List of East European Accessions, (EPAI) LC, Vol. 8, no. 10, 1959. -Oct.
Uncl.

KOLKASHEV, N.T.; IL'YUSHCHENKO, N.P.; FEMICHEV, V.I.

Structural control of mineralization in the Sayak deposit.

Izv. AN Kazakh. SSR Ser. geol. 22 no. 6:35-47 N-D '65

(MIRA 19:1)

1. Institut geologicheskikh nauk imeni K.I. Satpayeva, Alma-Ata.

KULKASHEV, N.T., kand. geologo-mineralog. nauk; FOMICHEV, V.I.

Role of dislocations with a break in continuity in the formation
of Iceland spar deposits in the Sayak syncline. Vest. AN Kazakh.
SSR 21 no.9:68-73 S '65. (MIRA 18:9)

KULKASHEV, N.T.

Axinites in skarns of central Kazakhstan. Vest.AN Kazakh.SSR
17 no.3:84-97 Mr '61. (MIRA 14:3)
(Kazakhstan—Skarns) (Axinite)

KULKASHEVA, M.; YATAYEV, M.

Distinguishing "Dangerous" and "safe" boundaries of the zone
of stability of automatic control systems. Izv. AN Kaz. SSR.
Ser. mat. i mekh. no.9:96-105 '61. (MIRA 14:3)
(Stability) (Automatic control)

BAYTSUR, A.I., inzh.; KUL'KES, Yu.I., inzh.; SAMOFAL, S.V.

Water tower with precast reinforced concrete bearing elements.
Bul. stroi. tekhn. 15 no.4:18-21 Ap '58. (MIRA 11:5)

1. Giprostal'.
(Water towers) (Precast concrete construction)

KUL'KEYEV, Maulet, mashinist ekskavatora; KULAKOV, B., redaktor; SHVIDKO, Z., redaktor; OYSTRAKH, V., tekhnicheskii redaktor

[Progressive work procedures of machinists operating excavators in coal mines] Peredovye priemy raboty mashinistov ugol'nykh ekskavatorov. Alma-Ata, Kazakhskoe gos. izd-vo 1956. 15 p. (MLRA 9:10)

1. Karagandinskiy ugol'nyy razrez. (for Kul'keyev)
(Excavating machinery)

KUL'KIN, K.M.

"The Electron-Beam Magnetron as a Generator"

Iz. Akad Nauk SSSR, Ser. Fiz., 4, No. 3, 1940.

Sci. Res. Physico-Technical Inst im N.G. Chernyshevskiy, Saratov State Univ.

KULKIN, K. M.

"Asymmetrical Excitation of Simple Cathode-Ray Magnetrons,"

Tr. Nikolayevskogo korablestroit. in-ta, No 7, pp 166-171, 1954

Characteristics of statics and the oscillatory range of two cathode-ray magnetrons with the cathode shifted outside the interspace of the double-split anode, coupled to Lecher wires, were obtained. The dependence of oscillations on the voltage difference between the anode sections was studied. It was found that oscillations occur only in the range of dropping characteristic of static. (RZhFiz, No 4, 1955)

SO: Sum, No 606, 5 Aug 55

Nikolayev ShchBudding Inst. 1955-1956
in S.C. Malinov

MURATOV, I.M.; KUL'KIN, K.M.

Voltage build-up in a p-n junction. Izv.vys.ucheb.zav.; fiz. no.3:
179-181 '63. (MIRA 16:12)

1. Udmurtskiy gosudarstvennyy pedagogicheskiy institut.

MURATOV, I.M.; KUL'KIN, K.M.

Voltage build-up in a semiconductor diode due to a direct current discontinuity. Izv. vys. ucheb. zav.; fiz. 8 no.1862-65 '65.

(MIRA 18:3)

1. Udmurtskiy pedagogicheskiy institut.

Name: KUL'KIN, S. G.

Dissertation: On the embryogenesis of the nerve apparatus of the human bladder

Degree: Cand Med Sci

Defended at
Affiliation: Stalingrad State Medical Inst

Publication
Defense Date, Place: 1956, Stalingrad

Source: Knizhnaya Letopis', No 45, 1956

USSR/Human and Animal Morphology (Normal and Pathological)
Peripheral Nervous System

S-3

Abs Jour : Ref Zhur - Biol., No 12, 1958, No 55101

Author : Kul'din, S.G.

Inst : Stalingrad Institute of Medicine.

Title : The Thin Structure of Pericellular Systems.

Orig Pub : Sb. nauch. robot teor. i klinich. kafedr Staligr. med.
in-ta, Stalingrad, 1956, 74-77

Abstract : In ontogenesis, the perifibrillar synaptic substance of the intramural neurons of the human urinary bladder is manifested much later than the neurofibrillar frame of the pericellular system, namely, in the same sequence as in the central nervous system. The differences in intensity of the perifibrillar substance impregnation depend primarily upon the functional state and the functional characteristics of the neuron which is in contact with this substance, as well as upon the functional state of the preganglionic fibers.

Cord : 1/1

USSR / Human and Animal Morphology. Nervous System. S-2
Peripheral Nervous System.

Abs Jour: Ref Zhur-Biol., No 14, 1956, 64803.

Author : ~~Kul'kin, S. G.~~
Inst : Stalingrad Medical Institute.
Title : Development of the Intramural Ganglion Apparatus
of the Urinary Bladder.

Orig Pub: Sb. Nauchn. rabot teor. i klinich. kafedr Stal-
ingrad. med. in-ta. Stalingrad, 1956, 85-88.

Abstract: In embryos 62 - 72mm long, there are, in the wall
of the urinary bladder (UB), accumulations of
neuroblasts ranging in size from six to seven m
(56 p.c.) and from 7.75 to 8 micron (12 p.c.),
lying along the path of the nerve fascicles, or
isolated in the muscular membrane, fetuses 210 to
240 mm long, particularly in the triangle of the

Card 1/2

USSR / Human and Animal Morphology. Nervous System. S-2
Peripheral Nervous System.

Abs Jour: Ref Zhur-Biol., No 14, 1958, 64903.

Abstract: UB, the nerve cells (ranging from 20 to 24 micron) are more differentiated than in the adventitia and the submucous membrane. The most differentiated nerve cells ranging from 28 -31 micron) were observed in fetuses 320 mm in length and in the newly born. The degree of differentiation of nerve cells is not uniform in one and the same layer of different sections of the UB. In the newly born, a large number of undifferentiated neuroblasts remain in the UB. -- A. S. Gurvich

Card 2/2

USSR/Human and Animal Morphology. Nervous System. Peri- S-3
pheral Nervous System

Abs Jour: Ref Zhur - Biol., No 19, 1958, 88417

Abstract: llary enlargements; closely adherent to it. In the fetus of 240-270mm, the area of contact between the fibers and the body of the nerve cell increased. In the fetus of 310-320 mm., the preganglionic fibres divided into slightly varicose branches, surrounding the nerve coll. The establishment of PS is not uniform, and thus in the fetus of 320-330mm. and in newborn children there are found, in the areas of contact, alongside of primitive ones, also complicated PS with annular ringlets, loops, bullous thickening and neurofibrillar lamellae. In the 9-months-old fetus and in the newborn, the terminal swelling is surrounded by perifibrillary material, adjacent to the body of the neuron. PS are formed by preganglionic fibers entering into the ganglion, or by fibres of the cells of the

Card 2/3 same ganglia. The synapses of the urinary bladder

USSR/Human and Animal Morphology. Nervous System. Peri- S-3
pheral Nervous System

Abs Jour: Ref Zhur - Biol., No 19, 1953, 88417

Abstract: appear earlier, as compared with other internal
organs, and differentiate more rapidly. --
A. S. Gurvich

Card 3/3

0036

AUTHOR:
TITLE:

PERIODICAL:

ABSTRACT:

KULIKIN, S.G.

The Development of the Afferent Innervation of the Inter-
of the Human Urinary. (Razvitiye afferentnoy innervatsii intra-
nykh gangliyev mochevogo puzrya cheloveka, Russian)
Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 1, pp 195-198 (U.S.S.R.)
Received: 6 / 1957
Reviewed: 7 / 1957

This innervation has hitherto not been the object of intense research.
Data concerning ganglia receptors are to be found only in one paper.
According to the methods described by BILSCHOWSKY-GROS and KAMFOS the
author studied this problem in connection with embryos, fetuses, and
newly born children. He was able to establish that complicated peri-
capsular receptors of intermural urinary neurons occur in the case of
human beings only in the post-fetal period of ontogeny. It is difficult
to tell to what extent the complicated morphological structure of
these receptors which was found corresponds to their function. In any
case, the author was able to convince himself that the ganglia of the
urinary have more complicated and sensitive systems in early stages
of embryogeny than other tissues of the walls of the bladder.
It may be followed from these investigations that the human central

ASSOCIATION:
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Card 1/2

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KUL'KIN, S.G.

Development of afferent innervation of the human bladder
[with summary in English]. Arkh.anat.gist. i embr. 35 no.3:38-44
My-Je '58 (MIRA 11:7)

1. Kafedra gistologii (zav. - prof. L.Ya. Likhachev) Stalingradskogo
instituta. I Meditsinskiy institut, kafedra gistologii, Stalingrad.
(BLADDER, innerv.
develop. of afferent receptors in fetus & newborn
inf. (Rus))

AUTHOR:

Kul'kin, S. G.

SOV/20-122-4-48/57

TITLE:

On Interneuronic Contacts in Human Bladder Ganglia During the Embryogenesis Period (O mezhneyronnykh svyazyakh v gangliyakh mochevogo puzrya cheloveka v period embriogeneza)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 4, pp 709 - 712 (USSR)

ABSTRACT:

There are no data to be found in literature on the contacts in intramural ganglia mentioned in the title. The author succeeded in detecting morphological pictures in the study of the bladder embryogenesis proving that the ganglia nerve cells enter already during the fetal period into synaptic relation. The contacts were found to exist between the neurons of the 1st type of Dogiel (Dogel) and apolar nerve cells, furthermore between the first mentioned ones, the neurons of the IIIrd type of Dogiel (Dogel), and the apolar nerve cells, and finally between the cells of the IInd and 1st type of Dogiel (Dogel). In the late periods of the embryogenesis (embryos of a length of 310, 320, and 330 mm) as well as in the case of new-born human beings the peri-

Card 1/3

On Interneuronic Contacts in Human Bladder Ganglia
During the Embryogenesis Period

SOV/20-122-4-48/57

fibrillary substance can be placed either on the surface of the neuroplasm of the nerve cell or penetrate deeply into the latter. The boundary between the mentioned components remains, however, in either case well recognizable (Figs 3 and 4). On the strength of the results obtained the author says that cells of the type I and II of Dogiel occur during the fetal and early postnatal period in the human bladder. They may enter into synaptic interneuronic contacts and form a morphological substrate of a local reflex arc. Given morphological facts confirm the assumption of I. P. Pavlov (Ref 1) that reflex arcs exist which consist of vegetative intramural neurons. This knowledge helps to explain to a certain extent the physiological processes which were observed by various researchers experimentally and in hospitals (Refs 2 - 6). There are 4 figures and 6 references, 5 of which are Soviet.

ASSOCIATION:

Stalingradskiy gosudarstvennyy meditsinskiy institut
(Stalingrad State Medical Institute)

Card 2/3

On Interneuronic Contacts in Human Bladder Ganglia
During the Embryogenesis Period

SOV/20-122-4-48/57

PRESENTED: May 24, 1958, by L. A. Orbeli, Member, Academy of Sciences,
USSR

SUBMITTED: May 20, 1958

Card 3/3

KUL'KINA, L.A.

The state of vascular tone in miners in diseases of the locomotor apparatus. Zdrav. Kazakh. 22 no.9:17-21 '62.

(MIRA 17:2)

1. Iz kafedry propedevtiki vnutrennikh bolezney (zav. - prof. A.A. Zemets) Karagandinskogo meditsinskogo instituta i kliniko-rentgenologicheskogo otdela (zav. - kand. med. nauk A.I. Nesis) Kazakhskogo instituta gigiyeny truda i professional'nykh zabolevaniy.

NESIS, A.I.; KUL'KINA, L.A.; ENNS, F.G.

Electrocardiographic and rentgoenological changes of the heart
in silicosis and anthracosilicosis. Izv. AN Kazakh. SSR. Ser.
med. nauk no.1:80-86 '63. (MIRA 16:10)

1. Iz Kazakhskogo instituta gigiyeny truda i professional'nykh
zabolevaniy (dir. kand. med. nauk Z.K. Tulegenov) i
Karagandinskogo pnevmokonioticheskogo tsentra (zav. starshiy
nauchnyy sotrudnik A.I. Nesis).

*

KUL'KINA, L.A.

Roentgenological characteristics and some parallels in osteoarticular changes in the miners of Karaganda and Dzhzhkazgan. Zdrav. Kazakh. 23 no.2:49-53'63.

(MIRA 16:10)

1. Iz kliniko-rentgenologicheskogo otdela (zav. - starshiy nauchnyy sotrudnik A.I.Nesis) Kazakhskogo instituta gigiyeny truda i professional'nykh zabolevaniy.

(KARAGANDA PROVINCE—MINERS—DISEASES AND HYGIENE)

(DZHEZHKAZGAN—MINERS—DISEASES AND HYGIENE)

(JOINTS—DISEASES)

(BONES—DISEASES)

L 28436-66 EWT(1) AT

ACC NR: AP6013129

SOURCE CODE: UR/0057/66/036/004/0726/0734

AUTHOR: Kul'kina, L.P.; Pasyuk, A.S.

ORG: none

TITLE: Distribution of the relative concentration of atoms and ions along and across the gas discharge in a source of multiply charged ions

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 4, 1966, 726-734

TOPIC TAGS: gas discharge plasma, neon, argon, krypton, ion distribution, ion source, spectrometry

ABSTRACT: The authors have employed a quartz prism spectrograph with photographic recording to measure the intensities of near ultraviolet lines of Ne, Ar, and Kr atoms and singly and doubly charged ions and of Ne and Ar triply charged ions in the reflex discharge of an ion source. The discharge tube was 7 mm square in cross section, 85 mm long between flared ends, and served as the anode. The 7 mm square hot tungsten cathode and the somewhat larger (usually molybdenum) anticathode were mounted some 110 mm apart in the flared ends of the chamber. The discharge tube was provided with three ports near the center for admission of gas. The discharge tube was operated with a gas pressure of 0.001 mm Hg at a potential of 600 V and a current of 10A in the presence of a 5 kOe longitudinal magnetic field. Suitable slots or ports in the wall of the chamber were imaged on the spectrograph slit and in this way the distri-

Card 1/3

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bution throughout the discharge of the intensities of the different lines was measured. The intensity distribution of all the lines due to any one gas, regardless of the state of ionization was the same. The intensities of the lines of all three gases were maximum near the center of the discharge tube, the maxima being slightly closer to the molybdenum anticathode for the heavier atoms (and ions). The argon discharge was examined with molybdenum, copper, and ion anticathodes, and the intensity distributions of lines of the anticathode materials, as well as those of argon, were recorded. These anticathode materials were selected for study because of their different behaviors as regards cathode sputtering. The intensity distribution of the argon lines with the steel anticathode was very similar to their intensity distribution with the molybdenum anticathode. With the copper anticathode, however, the argon maximum was shifted far toward the cathode and the copper lines were appreciable considerably beyond the center of the discharge tube. It is argued that the ion density must be constant along the length of the tube, and the shifts in the positions of the inert gas ion density maxima are ascribed to the influence of sputtered ions of anticathode (and cathode) material. In glow discharges, neither the molecular weight of the inert gas nor the anticathode material affected the line intensity distribution. When gas was admitted to the chamber in the vicinity of the cathode rather than near the center of the discharge tube, the line intensity maximum was shifted toward the cathode. The transverse distribution of line intensity showed a maximum on the axis of the discharge tube. The line intensity decreased with increasing distance from the axis somewhat more rapidly than did the depth of

Card 2/3

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ACC NR: AP6013129

4
sputtering of the cathode surface. This is accounted for by the fact that the depth of sputtering is proportional to the ion density, whereas the line intensity is proportional to the product of the ion density and the electron density, i.e., to the square of the ion density. The authors thank Yu. P. Tret'yakov and Kuo Ch'i-Ch'ien for assisting with the work and Professor A.R. Striganov and G.V. Sholin for discussing the results. Orig. art. has: 1 formula, 8 figures and 3 tables.

SUB CODE: 20

SUBM DATE: 15Mar65

ORIG. REF: 012

OTH REF: 007

Card 3/3 CC

Synthesis of 1,5-diphenyl-1-pentyn-3-ol and its derivatives. N. M. Malenok and S. D. Kul'kova. *Zhur. Obshchei Khim.* (J. Gen. Chem.) 19, 1715 (1949). $\text{PhC}\equiv\text{CH}$ (85 g.) condensed with 113 g. $\text{PhCH}_2\text{CH}_2\text{CHO}$ via the Giguatol method gave 51.4% 1,5-diphenyl-1-pentyn-3-ol, b_p 181-3°, d₄²⁰ 1.0830, n_D²⁰ 1.5942, which does not polymerize on 10 months' storage. The alc. boiled 5 hrs. with 15% KOH was cleaved to $\text{PhC}\equiv\text{CH}$ and $\text{PhCH}_2\text{CH}_2\text{CHO}$, while boiling 10 hrs. with Ac₂O gave 85% of the acetate, b_p 199-201°, d₄²⁰ 1.0835, n_D²⁰ 1.5882. Addn. of 70 g. of the alc. to 50 g. PdO in dry Et₂O, followed by standing 24 hrs. and refluxing 1 hr., gave 50.3% 1,5-diphenyl-3-penten-1-yne, b_p 164-6°, d₄²⁰ 1.03151, n_D²⁰ 1.6215, which does not polymerize on standing, and which (26.4 g.), oxidized at room temp. with 65 g. 29.3% AcO_2H 11 days at 10-23° gave 28% 1,5-diphenyl-3-penten-1-yne oxide, b_p 173-4°, d₄²⁰ 1.0811, n_D²⁰ 1.6031, as well as an unidentified solid, m. 118-19°. The actual oxidation, however, requires but 7 days, as shown by following another expt. by titration of the unreacted peroxide. G. M. K.

Inst. Chem., Belorussian AS.

RUL'KINA, S. D.

4
✓ Oxidation of vinylacetylenic hydrocarbons by organic
hydroperoxides II Oxidation of phenylthioethane
benzene by acetaldehyde peroxide
1958, 1201-1210

USSR/Chemistry Oxidation processes

Card : 1/1 Pub. 151 - 24/35

Authors : Malenok, N. M., and Kul'kina, S. D.

Title : Oxidation of vinylacetylene hydrocarbons with organic H_2O_2 . Part 2.-
Oxidation of 1-phenylethynyl-cyclohexane-1 with AcH_2O_2 .

Periodical : Zhur. ob. khim. 24, Ed. 7, 1212 - 1216, July 1954

Abstract : The product obtained from oxidation of an unsaturated hydrocarbon - 1-phenylethynyl-cyclohexane-1 with acetyl H_2O_2 , is described. The formation of an unsaturated ketone - $\Delta^{2,3}$ -cyclohexylidene-acetophenone, during the hydration of above mentioned oxidation product, is explained. The effect of acetic acid and water on the oxidation product, was analyzed. Three USSR, 3 USA and 3 German references.

Institution : Medical Institute, Minsk

Submitted : February 3, 1954

Kul'kina, S. D.

USSR/Chemistry - Hydrocarbon oxidation

Card 1/1 Pub. 151 - 24/37

Authors : Malenok, N. M., and Kul'kina, S. D.

Title : Oxidation of vinylacetylene hydrocarbons with organic hydrogen peroxides.
Part 3.- Oxidation of 3,6-dimethyl-octadiene-2,6-diene-4 with acetyl hydroperoxide.

Periodical : Zhur. ob. khim. 24/10, 1837-1841, Oct 1954

Abstract : The oxidation of divinylacetylene hydrocarbon with acetyl hydrogen peroxide was carried out for the purpose of obtaining the first of its oxidation products - acetylene dioxide-and to investigate its properties. It was established that hydrolysis of these dioxides leads to the formation of acetylene erythrites in which the presence of hydroxyl groups was proven by the derivation of tetracetyl derivatives. The presence of a ternary bond in the erythrite was established by quantitative bromination. The products obtained during oxidation of 3,6-dimethyl-octadiene-2,6-diene-4 with one and two moles of acetyl hydroperoxide are listed. Three USSR references (1936-1953). Tables.

Institution : The Medical Institute, Minsk

Submitted : April 16, 1954

KUL'KINA S. D.

AUTHORS: Malenok, N. M., Kul'kina, S. D., Kovtunenko, Z. Yu. 79-2-33/64

TITLE: The Oxidation of Vinylacetylene-Hydrocarbons With Organic Hydroperoxides (Okisleniye vinilatsetilenovykh uglevodorodov organicheskimi gidroperekisyami).
V. The Oxidation of the 6,9-Dimethyltetradecadiene-5,9-ins-7, 4,7-Dimethyldecadien-3,7-ins-5 and 3,6-Diethyloctadiene-2,6-ins-4 With Acetylhydroperoxide (V. Okisleniye 6,9-dimetiltetradekadiyen-5,9-ins-7, 4,7-dimetildekadiyen-3,7-ins-5 i 3,6-dietyl-oktadiyen-2,6-ins-4; gidroperekis'yu atsetila).

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 428-434 (USSR).

ABSTRACT: In a previous paper it was found that in the oxidation dioxides are produced by the hydroperoxides of acetyl, from divinylacetylene hydrocarbons with ethylene bindings in α - position to the acetylene binding ($-C\equiv C-C-C\equiv C-$), whereas the acetylene binding remains unchanged. This was confirmed by bromization. The three compounds mentioned in the title (I, II, III) obtained by the dehydration of the corresponding γ -acetyleneglycol were oxidized in order to confirm this. The oxidation process was observed volumetrically with an c. l n hyposulfite solution, whereas the bromization and syntheses were carried out according to usual methods. The dioxides of the following compounds:

Card 1/2

The Oxidation of Vinylacetylene-Hydrocarbons With Organic Hydroperoxides. 79-2-33/64

V. The Oxidation of the 6,9-Dimethyltetradecadiene-5,9-ins-7, 4,7-Dimethyldecadiene-3,7-ins-5 and 3,6-Diethyloctadiene-2,6-ins-4 With Acetylhydroperoxide.

6,9-dimethyl-5,9-dioxytetradecene-7, 4,7-dimethyl-3,7-dioxydecene-5, 3,6-diethyl-2,6-dioxyoctene-4, and their derivatives. 6,9-dimethyl-7-acetoxy-5-oxytetradecene-7-Ol-10, 4,7-dimethyl-7-acetoxy-3-oxydecene-5-Ol-8, 3,6-diethyl-2-oxyoctene-4-diol-6,7 and 3,6-diethyl-2-oxyoctene-4-diol-6,7 and 3,6-diethyl-6-acetoxy-2-oxyoctene-4-Ol-7 were obtained. In the hydrolysis of the diolides (I and II) the erytrites: 6,9-dimethyl-tetra-decene-7-tetraol-5,6,9,10 and 4,7-dimethyldecene-5-tetraol-3,4,7,8 were obtained. There are 3 tables, and 6 references, 3 of which are Slavic.

ASSOCIATION: Minsk Medical Institute (Minskiy meditsinskiy institut).

SUBMITTED: February 8, 1957.

AVAILABLE: Library of Congress.

Card 2/2

KUL'KINA S D

AUTHORS: Malenok, N. M., Kul'kina, S. D., 79-2-34/64

TITLE: The Oxidation of Vinylacetylene Hydrocarbons With Organic Hydroperoxides (Okisleniye vinilatsetilenovykh uglevodorodov organicheskimi gidroperekisyami) VI. The Oxidation of 1-Phenyl-3-Methyloctene-3-ins-1 With Acetylhydroperoxide (VI. Okisleniye 1-fenil-3-metilokten -3-ina-1 gidroperekis'yu atsetila)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 434-438 (USSR)

ABSTRACT: 1-phenyl-3-methyloctene-1-ol-3 was obtained according to Zh.I. Iotsich and by dehydration transformed into 1-phenyl-3-methyloctene-3-in-1 which yields 1-phenyl-3-methyl-3-oxidoctene-1 (I) and 1-phenyl-3-methyl-3-acetoxyoctene-1-ol-4 by the oxidation with acetylhydroperoxide. 1-phenyl-3-methyloctene-1-diol-3,4 is formed in the hydrolysis of (I) with H₂SO₄ of 1%. Secondary reactions occur easily if the oxide ring in the acetylene hydrocarbon is bound to secondary and tertiary, or tertiary carbon atoms. In the hydration of the oxide (I) according to M.G. Kucherov two substances were obtained: 1-phenyl-3-methyloctene-2-ol-4-on-1 and 1-phenyl-3-methyloctadiene-2,4-on-1 the formation of which is explained by the fact that two water molecules are produced by the influence of the mercury chloride. One is added to the fission place of the oxide ring, the other

Card 1/2

The Oxidation of Vinylacetylene Hydrocarbons With Organic Hydroperoxides. VI. The Oxidation of 1-Phenyl-3-Methyloctene-3-ene-1 With Acetylhydroperoxide. 79-2-34/64

to the acetylene binding. A ketoglycol (was isolated) which then forms the two last mentioned compounds by dehydration is formed transitorily. The simultaneous hydration and dehydration according to the reaction of M.G. Kucherov was observed by the authors for the first time at the 1-phenylethynylcyclohexene-1. Experimental and specific data of the above mentioned compounds are given. There are 2 Slavic references.

ASSOCIATION: Minsk Medical Institute (Minskiy meditsinskiy institut)
SUBMITTED: February 14, 1957
AVAILABLE: Library of Congress

Card 2/2

GRABAROV, P.G.; KUL'KINA, S.K.

Manganese content in the straw and grain of cereal crops cultivated
in TSelinograd and Karaganda Provinces. Izv. AN Kazakh.SSR. Ser.
bot. i pochv. no.2:94-97 '61. (MIRA 15:2)
(Grain--Analysis) (Manganese)

KUL'KO, V.A.

Doubled lessons in the senior grades of evening schools. Fiz.
v shkole 23 no.4:79-80 J1-Ag '63. (MIRA 17:1)

1. 17-ya shkola rabochey molodezhi, Volgograd.

ACC NR: AT6020467

(A)

SOURCE CODE: UR/0000/65/000/000/0009/0019

AUTHOR: Kul'ko, V. F. (L'vov); Mikhaylovskiy, V. N. (L'vov)

ORG: none

TITLE: The electromagnetic field of a straight, infinitely long conducting cable buried in one of the inner strata of a multi-layered medium

SOURCE: AN UkrSSR. Teoriya i elementy sistem otbora geofizicheskoy informatsii (Theory and elements of systems for selecting geophysical information). Kiev, Naukova dumka, 1965, 9-19

TOPIC TAGS: electromagnetic field, magnetic field measurement

ABSTRACT: The authors derive expressions for the electric and magnetic field at any point of a given layer (see Fig. 1) for two cases: 1) when all strata are nonconductors, and 2) when the stratum containing the cable is a better conductor than the other strata. Orig. art. has: 1 figure, 45 formulas.

Card 1/2

ACC NR: AT6020467

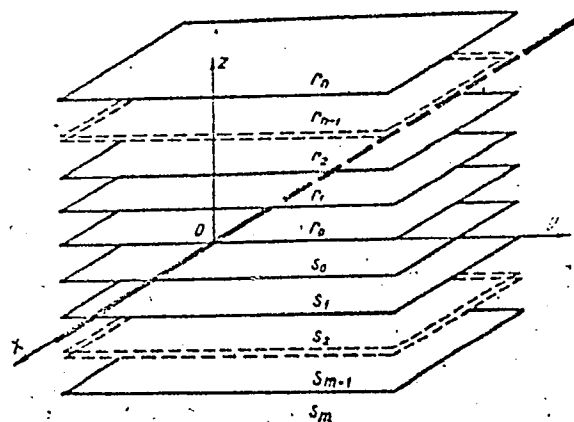


Fig. 1.

SUB CODE: 20 /

SUBM DATE: 10Nov65/

ORIG REF: 002

Card 2/2

ACC NR: AT6020468

(A)

SOURCE CODE: UR/0000/65/000/000/0020/0032

AUTHOR: Kul'ko, V. F. (L'vov); Mikhalovskiy, V. N. (L'vov)

ORG: none

TITLE: The electromagnetic field of a horizontal dipole embedded in an interior layer of a multi-layered conducting medium

SOURCE: AN UkrSSR. Teoriya i elementy sistem otbora geofizicheskoy informatsii (Theory and elements of systems for selecting geophysical information). Kiev, Naukova dumka, 1965, 20-32

TOPIC TAGS: electromagnetic field, dipole interaction, magnetic field measurement

ABSTRACT: The electric and magnetic fields in each layer of the system in Fig. 1 are calculated. The method of solution consists of solving a system of $4n + 4n$ simultaneous linear equations satisfying the boundary conditions. Orig. art. has: 40 formulas, 1 figure.

Card 1/2

ACC NR: AT6020468

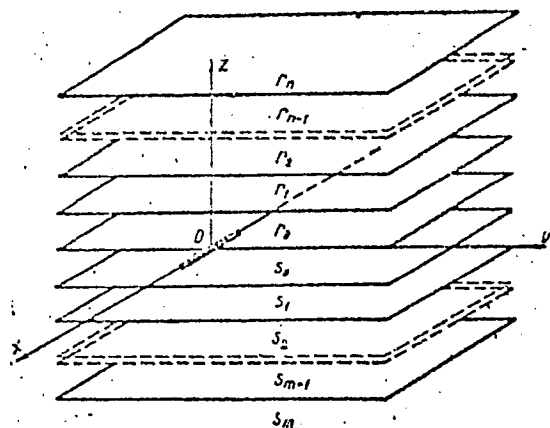


Fig. 1.

SUB CODE: 20 /

SUBM DATE: 10Nov65/

ORIG REF: 002

Card 2/2

VASHENTSEVA, V.M.; VOLKOV, M.I.; ZHAMIN, V.A.; ZHUKOV, F.G.; CHUBUK, I.F.;
KAPUSTIN, Ye.I.; KOZLOVA, N.G.; KOROCHKIN, V.V.; KUL'KOV, A.V.;
MARINKO, I.L.; MOLCHALOV, B.M.; ROMANOV, B.V.; FEDOROV, V.I.;
SHIRINSKIY, I.D.; GRINGAUZ, A., red.; SHLYK, M., tekhn. red.

[How to study the economics of socialism] Kak izuchat' politicheskuu ekonomiiu sotsializma; posobie dlia rukovoditelei seminarov sistemy partiinogo prosveshcheniia. Moskva, Mosk. rabochii, 1961. 239 p. (MIRA 14:8)

1. Dom politicheskogo prosveshcheniya, Moscow.
(Economics—Study and teaching)

LAMIN, P.Z.; KUL'KOV, B.A.; VOLOVİK, Ya.P.

Self-start system of low-voltage electric motors. Energ. i elektrotekh.
prom. no.1:60 Ja-Mr '65. (MIRA 18:5)

KUL'KOV, B. M.

22399. KUL'KOV, B. M. O Redkikh Rasteniyakh Moskovskoy Flory. Byulleten' Glav.
Botan. Sada, VYP. 2, 1949, S. 99-101

SO: Letopis' No. 30, 1949

KUL'KOV, E.I., inzh.; FAYBISOVICH, V.A., inzh.

Recording of the angular velocity for the derermination of the
inertial constant of a synchrono-- generator. Elek.sta. 33 no.2:
87 F '62. (MIRA 15:3)

(Electric generators)

KUL'KOV, E.I., inzh.; KOSHEI', N.M., inzh.

Study of operation of a PT-50-130/13 turbine control system.
Taploenergetika 12 no.1:27-30 Ja '65. (MIRA 18:4)

1. Glavnoye upravleniye energetiki i elektrifikatsii pri Sovete
Ministrov BSSR.

ACC NR: AP6034476 (A,N) SOURCE CODE: UR/0433/66/000/010/0029/0030

AUTHOR: Kravtsov, A. (Station chief); Kul'kov, I. (Chief engineer)

ORG: none

TITLE: Maintenance of machinery

SOURCE: Zashchite rasteniy, no. 10, 1966, 29-30

TOPIC TAGS: ~~pest control machinery~~, aerosol generator, agricultural machinery, plant disease control, insect control, crop spraying

ABSTRACT: The Alma-Ata plant protection station is in charge of plant pest and disease control of city vegetation, which occupies an area of 4500 ha (including 2500 ha of orchards). The station has the following equipment at its disposal: 51 tractors; 51 sprayers of the OPV and OVT-1 series; 18 motor vehicles (including 2 cars); 6 water tanks mounted on GAZ-61 trucks; 2 fuel-servicing trucks; one GosNITI-2 (State All-Union Technological Scientific Research Institute for the Repair and Utilization of Tractors and Agricultural Machinery) automotive repair shop; and an aerosol generator (see Fig. 1) mounted on the chassis of a discarded OPV sprayer. Early in 1966 a flame cultivator was acquired to control dodder. The OVT-1 sprayer was modified for use in the city. It was mounted on a GAZ-51 truck and operated through power take-off and

Card 1/2

UDC: 632.915/.982.059

ACC NR: AP6034476

chain gearing. This unit has good maneuverability. The spraying trucks carry a lance boom and a hose wound on hooks, which are welded to the

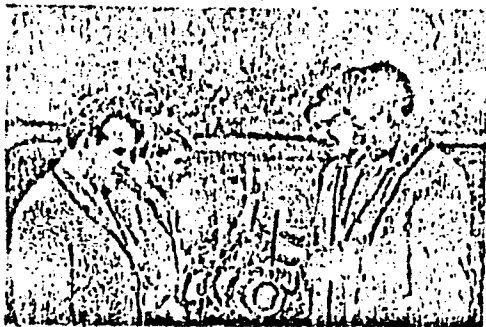


Fig. 1. Aerosol generator

rear of the truck. Two metal (iron) boxes, which replace the blower on the far side of a tank, hold a day's supply of toxic chemicals.

[WA-50]

SUB CODE: 06,02,13/ SUBM DATE: none

Cord 2/2

ACC NR: AP6034476 (A,N) SOURCE CODE: UR/0433/66/000/010/0029/0030

AUTHOR: Kravtsov, A. (Station chief); Kul'kov, I. (Chief engineer)

ORG: none

TITLE: Maintenance of machinery

SOURCE: Zashchita rasteniy, no. 10, 1966, 29-30

TOPIC TAGS: ~~pest control machinery~~, aerosol generator, agricultural machinery, plant disease control, insect control, crop spraying

ABSTRACT: The Alma-Ata plant protection station is in charge of plant pest and disease control of city vegetation, which occupies an area of 4500 ha (including 2500 ha of orchards). The station has the following equipment at its disposal: 51 tractors; 51 sprayers of the OPV and OVT-1 series; 18 motor vehicles (including 2 cars); 6 water tanks mounted on GAZ-61 trucks; 2 fuel-servicing trucks; one GosNITI-2 (State All-Union Technological Scientific Research Institute for the Repair and Utilization of Tractors and Agricultural Machinery) automotive repair shop; and an aerosol generator (see Fig. 1) mounted on the chassis of a discarded OPV sprayer. Early in 1966 a flame cultivator was acquired to control dodder. The OVT-1 sprayer was modified for use in the city. It was mounted on a GAZ-51 truck and operated through power take-off and

Cgrd 1/2

UDC: 632.915/.982.059

ACC NR: AP6034476

chain gearing. This unit has good maneuverability. The spraying trucks carry a lance boom and a hose wound on hooks, which are welded to the

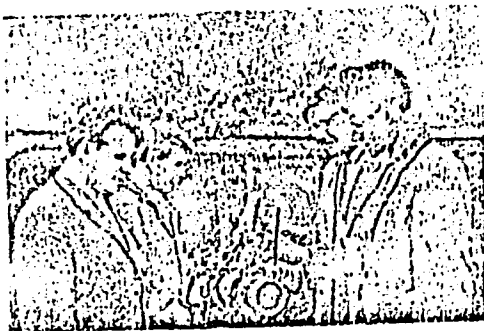


Fig. 1. Aerosol generator

rear of the truck. Two metal (iron) boxes, which replace the blower on the far side of a tank, hold a day's supply of toxic chemicals.

[WA-50]

SUB CODE: 06,02,13/ SUBM DATE: none

Card 2/2

AUTHOR: Kul'kov, K.V.

SOV/106-59-1-1/12

TITLE: Sequential Addition of Messages in Communication Systems
using Duplication (Posledovatel'noye summirovaniye
soobshcheniy v sistemakh svyazi s dublirovaniyem)

PERIODICAL: Elektrosvyaz', 1959, Nr 1, pp 3-11 (USSR)

ABSTRACT: Until recently a common method of increasing the reliability of a communication system was by simultaneous duplication of the signals. Fig 1 shows the principle of the method in which the outputs from a number of channels are added simultaneously in a combining device. A basic disadvantage of this method is that the receiver must provide separate amplifiers for all the input channels. Further drawbacks are the possibility of overload of other channels by predominant noise in one of them and crosstalk. Fig 2 shows the principle of the sequential method in which a single common amplifier is used. Switching speed of the commutator depends on the mean width of the spectrum of the disturbing signals in the separate channels. It is shown further on, that with adequate switching speed the improvement in signal-to-noise ratio at the output of the summing device is not

Card 1/4

SOV/106-59-1-1/12

Sequential Addition of Messages in Communication Systems using Duplication

less than that obtained by the method of simultaneous addition. Eq (1) is an expression for the signal-to-noise ratio at the output of the summator in terms of P_c (the signal power in a single channel) and P_n (the noise power in a single channel), both of these with continuous connection; n_0 is the number of independent duplicated channels. Improvement in performance is explained in physical terms by a broadening of the noise spectrum upon commutation and a subsequent reduction of the proportion of this energy which is allocated into the band of the summing device. It will be first assumed that the bandwidths occupied by the signal, the noise and the summing circuit are approximately equal (Eq 2) but that of the amplifier is large enough not to cause distortion. The sum of a signal and noise in each channel is given by (3). If the operations are carried out at carrier frequency then a similar condition governing identity of frequency is assumed as in (4). When periodic switching takes place the random function of noise at the input to the summator is given by (6) where $A_k(t)$ represents a periodic sequence of switching

Card 2/4

SOV/106-59-1-1/12

Sequential Addition of Messages in Communication Systems using Duplication

pulses and is given in some detail in (8). The respective powers of a signal and noise present in the bandwidth of the summing device are calculated by the usual method using correlation functions as in (10), while the powers after commutation are given in (11). When the shape of the noise spectrum $G_{ko}(\omega)$ is known it is possible to calculate the characteristics change in signal to noise upon commutation. However, if the switching speed F_k is less than or equal to ΔF_k (width of the energy spectrum of the noise) then the calculation requires evaluation of a large number of terms. It is therefore convenient to represent the corresponding expression in integral form if the commutation integral is chosen so that the correlation function is given by (14). Then (11) simplifies to (15) and this leads to the conclusion (17) that the performance with this method of switching is identical with that obtained with simultaneous combination of channels. The penultimate section of the paper deals with the modifications and calculations necessary when carrier frequencies are used. The

Card 3/4

SOV/106-59-1-1/12

Sequential Addition of Messages in Communication Systems using
Duplication

expression for the noise spectrum is (18) and the expressions corresponding to (15) and (16) are respectively (21) and (22) which are valid for $T_k > \tau_0$ and $T_k < \tau_0$ respectively. Again the result is obtained that this method can give the same results as simultaneous combination. Moreover it will be seen that the limiting performance is approached even with switching speeds which are only three times greater than the equivalent width of the noise spectrum.

Card 4/4

There are 4 figures and 1 Soviet reference.

SUBMITTED: March 2, 1958

23609

S/108/61/000/006/005/008
D201/D305

6.9200

AUTHORS: Viter, V.V., and Kul'kov, K.V., Members of the Society
(See Association) ✓

TITLE: The use of pulse counters for measuring the correlation coefficient between the excess threshold level and a random signal

PERIODICAL: Radiotekhnika, no. 6, 1961, 40 -44

TEXT: In analyzing the threshold system it is of interest to be able to determine the correlation coefficient between the excess of a given threshold level at predetermined intervals and the incoming signal. The problem usually reduces to that of determining the autocorrelation coefficient of pulse amplitudes which would operate the threshold normalizer. In the present article the authors analyze one of the related methods of measurement. The analyzed quasi-periodic pulse repetition rate with arbitrary amplitudes and a known repetition period T_p is denoted by φ_{qp} and the re-

Card 1/7

The use of pulse counters ...

S/108/61/000/006/005/008
D201/D305

petition rate having the same period by φ_p . The probability of excess threshold x_0 or, in other words, the probability of occurrence of event $i = 1$ is denoted by β , i.e. $P(i = 1) = \beta$. The probability of the opposite even $i = 0$ will thus be $P(i = 0) = 1 - \beta$. For a stationary process the probability of events i as a result of repetitive $\varphi_{qp}(x)$ is equal to the probability of events j resulting from $\varphi_{qp}(y)$ or

$$P(i) = P(j) = \begin{cases} \beta & \text{for } i \text{ (or } j) = 1 \\ 1 - \beta & \text{for } i \text{ (or } j) = 0 \end{cases} \quad (2)$$

hence the mean values of x and y are:

$$m_x = m_y = \sum_{i=0}^1 i P(i) = \beta, \quad (3)$$

the distribution law of $P(i, j; k)$ of a system of quantities (x, y) can be represented in the form:

Card 2/7

23609

S/108/61/000/006/005/008
D201/D305

The use of pulse counters ...

$$P(i, j, k) = P(i)P(j/i; k) = \begin{cases} \beta P(j/1; k) = \begin{cases} \beta P_{11}(k) & \text{for } i=j=1 \\ \beta P_{10}(k) & \text{for } i=1, j=0 \end{cases} \\ (1-\beta)P(j/0; k) = \begin{cases} (1-\beta)P_{01}(k) & \text{for } i=0, j=1 \\ (1-\beta)P_{00}(k) & \text{for } i=j=0. \end{cases} \end{cases}$$

From the above, the correlation coefficient of quantities x and y is derived for the stationary case as ρ_c in

$$\rho_c = \frac{P_{11}(k) - \beta}{1 - \beta} \quad (1)$$

The authors conclude that in order to determine the correlation coefficient ρ_c between the pulse amplitudes which produce excess threshold and operate the installations it is necessary to measure the following: 1) The average repetition frequency $F_{11}(k)$ of paired states $ij = 11$; 2) The average frequency F_1 at which the

Card 3/71

23609

S/108/61/000/006/005/008
D201/D305

The use of pulse counters ...

threshold circuit operates and 3) The repetition frequency of periodic pulses F_p . The above measurements can be done using averaging pulse counters. The block diagrams of the installation for detection of paired states $kj = 11$ at any interval kT_p and that of counters C for measuring frequencies F_{11} , F_1 and F_p are shown in Fig.

3. The storage of information, produced by consecutive ones and zeros corresponding to the operation and cut off of threshold cct (Thr), is assured by applying the information to a register. The register consists of series connected triggers $T_1 \div T_n$ and at its input are applied pulses of the analyzed repetition rate φ_{qp} which pass through the threshold. These pulses are simultaneously applied to the input of counter C_1 for measuring frequency F_1 . The measurement of repetition frequency of paired states F_{11} is done at the output of the coincidence circuit consisting of switches S_1 and S_2

Card 4/8

23609

S/108/61/000/006/005/008

D201/D305

The use of pulse counters ...

and using counter C_2 . The shifting of information along the register and reading of the states of triggers connected to switches S_1 and S_2 is secured by the pulses with repetition rate φ_p . The repetition rate of pulses with F_p is measured by counter C_3 . In practice, all three frequencies can be measured by an averaging counter, such as e.g. type MCC (ISS). As an example, Fig. 4 shows the normalized autocorrelation function $\rho(\tau)$ of pulse amplitudes triggering a valve trigger with a probability $\beta = 0.8$. There are 4 figures and 1 non-Soviet-bloc reference. The reference to the English-language publication reads as follows: M.S. Bartlett. Proceedings of the Cambridge Philosophical Society, v. 47, no. 1, January 1951.

ASSOCIATION: Nauchno - tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A.S. Popova (Radio Engineering and Electrical Communications Society im. A.S. Popov).
[Abstractor's note: Name of association taken from first page of journal]

SUBMITTED: May 27, 1960 (initially)
February 1, 1961 (after revision)

Card 5/7

KUL'KOV, N. P.

KUL'KOV, N. P. "Lower Devonian and Eifelian brachiopods of the north-eastern slope of the Salair." Min Higher Education USSR. Tomsk Order of Labor Red Banner Polytechnic Inst imeni S. M. Kirov. Chair of Historical Geology. Tomsk, 1956. (Dissertation for the Degree of Candidate in Geologicomineralogical Sciences).

in: Knizhnyye Letopis' No. 22, 1956

KUL'KOV, N.P.

New genus of spiriferids from Eifelian deposits of the northeastern slope of the Salair Ridge. Dokl.AN SSSR 132 no.4:929-931 Je '60. (MIRA 13:5)

1. Institut geologii i geofiziki Sibirskogo otdeleniya Akademii nauk SSSR. Predstavleno akademikom A.L.Yanshinym.
(Salair Range--Brachiopoda, Fossil)

KUL'KOV, N.P.

Stratigraphic position of the Solov'ikha limestone in the northwestern
Altai. Dokl. AN SSSR 134 no.6:1417-1420 O '60. (MIRA 13:10)

1. Institut geologii i geofiziki Sibirskogo otdeleniya Akademii nauk
SSSR. Predstavleno akademikom A.L.Yanshinym.
(Solov'ikha region—Limestone)
(Geology, Stratigraphic)

KUL'KOV, N.P.; YELKIN, Ye.A.

Recent data on upper Silurian stratigraphy of the northern Altai .
Dokl. AN SSSR 135 no.1:152-154 N'60. (MIRA 13:11)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.
Predstavleno akademikom A.A. Trofimukom.
(Altai Mountains--Paleontology, Stratigraphic)

KUL'KOV, N.P.

New species of Spiriferidae from the Lower Devonian of the
Gornyy Altai. Dokl.AN SSSR 145 no.3:653-656 J1 '62. (MIRA 15:7)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.
Predstavleno akademikom A.L.Yanshinym.
(Altai Mountains--Brachiopoda, Fossil)

KUL'KOV, Nikolay Petrovich; GRATSIAKOVA, R.T., kand. geol.-miner.
nauk, otv. red.; GRIGOR'YEVA, A.D., red.izd-va; KALANTAROV,
A.P., red.izd-va; MATYUKHINA, L.I., red.izd-va; DOROKHINA,
I.N., red.izd-va

[Brachiopods in Lower Devonian Solov'ikha layers of the Gornyy
Altai] Brakhiopody solov'ikhinskikh sloev nizhnego devona Gor-
nogo Altaia. Moskva, Izd-vo AN SSSR, 1963. 130 p.

(MIRA 16:12)

(Altai Mountains--Brachiopoda, Fossil)

ALIKSEYEVA, R.Ye.; BETERENTINA, O.A.; VOZZHENNIKOVA, T.F.; GRATSIAKOVA, R.T.;
DUBATOLOV, V.N.; YALNIN, Ye.A.; ZAKHAROV, V.A.; IVANOVSKIY, A.B.;
SIDYACHENKO, A.I.; KULIKOV, E.P.; MYASHOVA, Ye.I.; OBIT, A.M.;
SAKS, V.N.; TESANOV, Yu.I.; FURSIZKO, A.V.; KHOLIMOVSKIY, V.V.;
YUFEREV, O.V.

Corresponding Member of the Academy of Sciences of the U.S.S.R.
Boris Sergeevich Sokolov; 1914 - ; on his 50th birthday. Geol.
i geofiz. no.8:140-147 '64 (MIRA 18:2)

KALUGIN, A.S.; ANAN'YEV, A.R.; GRATSIAKOVA, R.T.; KUL'KOV, N.P.; MIRONOVA, N.V.;
NADLER, Yu.S.

Stratigraphic position and the age of the horizon of the volcanic
sedimentary iron ores in Devonian sediments in the Altai. Trudy
SNIIGGIMS no.29:142-148 '64. (MIRA 18:3)

KUL'KOV, O. P.: Master Agric Sci (diss) -- "Aspects of the formation of the pomegranate harvest". Stalinabad, 1958. 18 pp (Acad Sci Tadzhik SSR), 150 copies (KI, No 13, 1959, 109)

KUL'KOV, O.P.

Introducing trees and shrubs in southern Uzbekistan.
Biul.Glav.bot.sada. no.58:30-33 '65.

(MIRA 18:12)

1. Yuzhnouzbekskaya selektsionnaya plodovo-vinogradnaya
stantsiya nauchno-issledovatel'skogo instituta sadovodstva,
vinogradarstva i vinodeliya imeni akademika R.R.Shredera, g.
Denau.

KUL'KOV, P.M. (Novosibirsk)

New possibilities of a consolidated section. Zhel.dor.transp.
44 no.5:77-80 My '62. (MIRA 15:5)

1. Nachal'nik Novosibirskogo otdeleniya Zapadno-Sibirskoy
dorogi.

(Railroads---Management)

KUL'KOV, V.

Thoughts about people. Sov.shakht. 11 no.11:14-16 N '62.
(MIRA 15:11)

1. Nachal'nik shakhty No.19-20 tresta Gukovugol', Rostovskaya obl.
(Donets Basin--Coal miners)

40982

S/659/62/009/000/016/030

1003/1203

AUTHORS: Savitskiy, K. V., Zhdanova, V. N., Savitskiy, A. P. and Kulkov, V. A.

TITLE: On strengthening of metals by dispersed particles

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Issledovaniya po zharoprochnym splavam.
v. 9. 1962. Materialy Nauchnoy sessi po zharoprochnym splavam (1961 g.), 119-126

TEXT: The above subject has recently been widely investigated. In the present work the crystalline structure of a deformed sintered $\text{Cu-Al}_2\text{O}_3$ alloy was investigated by mechanical tests and by X-ray analysis. It is concluded that in the $\text{Cu-Al}_2\text{O}_3$ system in which the Al_2O_3 particles are practically insoluble, the mean dimensions of the blocks of the mosaic structure are smaller the higher the concentration of the strengthening phase, and the smaller the dimensions of its particles. The production of heat-resistant metals with a high degree of hardness and high melting points which contain fine insoluble inclusions is very promising. In the discussion, A. Ya. Shinyayev suggested that the diffusion of such oxide inclusions in metals should be investigated, and thus throw light on the possible use of this method for the production of heat-resistant alloys. V. V. Grigor'yeva stressed that great attention should be paid to the problems discussed in the present article. There are 4 figures and 1 table.

Card 1/1

21(8)

SOV/56-35-5-42/56

AUTHORS: Kogan, A. V., Kul'kov, V. D., Nikitin, L. P., Reynov, N. M., Sokolov, I. A., Stel'makh, M. F.

TITLE: Measurement of the β - γ -Correlation of Orientated Nuclei
(Izmereniye β - γ -korrelyatsii oriyentirovannykh yader)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 5, pp 1295-1296 (USSR)

ABSTRACT: Reference is first made to some earlier papers dealing with this subject. When investigating correlation, the authors constructed a device for the orientation of nuclei and took several measures for the purpose of extending the duration of measurements and improving their statistical accuracy. The main source of heat supply is thermal radiation, which passes through a light pipe, which is used for transmitting the flashes of light produced in a plastic scintillator during the recording of β -particles. The β -radiation asymmetry of Co^{60} -nuclei was measured. These cobalt nuclei were introduced into a thin superficial layer of a cesium-magnesium-nitrate crystal. The authors carried out their measurements

Card 1/2

SOV/56-35-5-42/56

Measurement of the β - γ -Correlation of Orientated Nuclei

of the β - γ -angular correlation on orientated Co^{60} -nuclei. The provisional data obtained by these measurements are not in contradiction to theoretical calculations which were carried out on the basis of the conservation of combined parity. Further, the investigation of β - γ -angular correlation for Mn^{52} and V^{48} is planned. The authors thank A. I. Alikhanov, Academician, and Professor S. Ya. Nikitin for placing the Co^{58} at their disposal (this element is, by the way, less well suited for measurements of the here described kind); they further express their gratitude to A. Z. Dolginov for many useful discussions, and to O. V. Larionov for the chemical separation of Co^{58} . There are 2 figures and 6 references, 1 of which is Soviet.

ASSOCIATION: Leningradskiy fiziko—tekhnicheskii institut Akademii nauk SSSR
(Leningrad Physico-Technical Institute of the Academy of Sciences, USSR)

SUBMITTED: July 9, 1958

Card 2/2

Kul'kov, V. D.

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S/056/60/039/01/06/029
B006/B070

24.2200

AUTHORS: Kogan, A. V., Kul'kov, V. D., Nikitin, L. P., Reynov, N. M.,
Sokolov, I. A., Stel'makh, M. F.

TITLE: The Polarization of Sc^{46} Nuclei in Iron 4

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,
Vol. 39, No. 1 (7), pp. 47-52

TEXT: B. N. Samoylov, V. V. Sklyarevskiy and Ye. P. Stepanov (Refs. 8-10) succeeded in polarizing the nuclei of a number of weakly magnetic elements alloyed with ferromagnetics. They discovered the possibility of orienting the nuclei of many elements including scandium. In the present paper, the first results found by the authors on the orientation of

Sc^{46} introduced into iron are published. Fig. 1 shows a schematic cross section of the apparatus employed for the purpose. Its description is given in the introduction. To check the working of the apparatus, experiments were first made on the orientation of Co^{60} in iron ($\leq 0.02\%$ Co) which are described in detail. Fig. 2 shows the asymmetry of the gamma

Card 1/3

82598

The Polarization of Sc^{46} Nuclei in Iron

S/056/60/039/01/06/029
B006/B070

radiation of Co^{60} as a function of temperature. The asymmetry is characterized by $\epsilon = [I(\pi/2) - I(0)] / I(\pi/2)$. Next, the experiments carried out on scandium are described. The neutron irradiated scandium was introduced as a metal into pure iron (Sc concentration $\leq 0.5\%$). A large number of asymmetry measurements of the gamma radiation from Sc^{46} were made in the temperature range of from 0.03 to 0.015°K. At the lowest temperatures $\epsilon = 2.5\%$. The sign of the asymmetry agreed with the known dipole character of the cascade gamma transitions in Ti^{46} . Fig. 3 shows the asymmetry of gamma radiation for temperatures of the cooling salt between 0.025-0.03°K. ϵ was also measured for other temperatures. At 0.04-0.05°K, ϵ was 1%, at $\sim 1.2^\circ\text{K}$, however, it was 1.8%, showing that the temperature dependence of the asymmetry of gamma radiation for small values of $1/T$ cannot be determined with sufficient accuracy. The magnetic moment of Sc^{46} was not measured. Still, it can be estimated with sufficient accuracy to be 3.5 nuclear magnetons, from which the effective magnetic field on Sc^{46} nucleus in iron for $1/T = 25$ is found to be $H_{\text{eff}} \approx 10^5$ oersteds. The

Card 2/3

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The Polarization of Sc^{46} Nuclei in Iron

S/056/60/039/01/06/029
B006/B070

possible errors in this determination are then discussed. They are related to the errors in the determination of nuclear magnetic moments, ϵ , and T , and the error resulting from imperfect domain orientation.

Taking these into account H_{eff} lies within the limits $3.0 \cdot 10^5 \leq H_{\text{eff}} \leq 4.0 \cdot 10^5$ oe for Co^{60} and $0.70 \cdot 10^5 \leq H_{\text{eff}} \leq 1.30 \cdot 10^5$ oe for Sc^{46} . Finally, ✓

the possible investigations of $\beta\gamma$ -correlation for oriented Sc^{46} nuclei are very briefly discussed. The authors thank Professor N. P. Sazhin for making available metallic scandium, and Professor A. Z. Dolginov for the derivation of the asymmetry formula. G. R. Khutsishvili and L. M. Shestopalov of Fiziko-tekhicheskiy institut AN SSSR (Physicotechnical Institute of the AS USSR) are mentioned. There are 3 figures and 21 references: 7 Soviet, 8 American, 1 Canadian, 3 Dutch, and 2 British.

ASSOCIATION: Leningradskiy fiziko-tekhicheskiy institut Akademii nauk SSSR (Leningrad Physicotechnical Institute of the Academy of Sciences of the USSR)

SUBMITTED: February 20, 1960

Card 3/3

KOGAN, A.V.; KUL'KOV, V.D.; NIKITIN, L.P.; REYNOV, N.M.; SOKOLOV, I.A.
STEL'MAKH, M.F.

Polarization of some radioactive isotopes in alloys
containing iron. Zhur. eksp. i teor. fiz. 40 no.1:109-113 Ja
'61. (MIRA 14:6)
(Iron alloys) (Magnetic fields)

27.04.10

S/056/62/043/003/015/063
B102/B104

AUTHORS: Kogan, A. V., Kul'kov, V. D., Nikitin, L. P., Reynov, N. M.,
Stel'makh, M. F., Shott, M.

TITLE: Asymmetry in β -radiation from some nuclei polarized in an
iron-containing alloy

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,
no. 3(9), 1962, 828-830

TEXT: The authors measured the β -emission asymmetry of Re^{186} , Ir^{192} and
 In^{114} nuclei polarized at 0.1-0.03°K in an iron alloy, using an apparatus
described in ZhTF, 29, 1039, 1959 or ZhETF, 35, 295, 1958. The values of
 $\mu_n^H \text{eff}$ (μ_n -nuclear magnetic moment, H_{eff} - effective field acting on the
nucleus) were determined from the asymmetry given as

$$\epsilon_p(T) = [W(0^\circ) - W(\pi)] / [W(0^\circ) + W(\pi)] = A(v/c)f_1,$$

when, for allowed β -transitions, $W(\lambda) = 1 + A(v/c)f_1 \cos^2 \lambda$. $W(0^\circ)$ is the
 β -radiation recording probability if the magnetic field is applied in the
Card 1/3

Asymmetry in β -radiation from some...

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B102/B104

direction of the detector, $W(\pi)$ is the same if \vec{H} has the opposite direction; A is a factor depending only on the spins I_1 and I_0 (I_1/I_0) of final and initial states, f_1 - nuclear polarization coefficient, ϑ - angle between the direction of nuclear polarization and that of particle emission. For Re and Ir the quantity $10^{18} \mu_n H_{\text{eff}}$ was determined from the slope of the straight line $\epsilon_\beta(1/T)$ giving 8 ± 1 for Re and 4 ± 0.5 for Ir. These values do not agree with the results of γ -anisotropy measurements (2.5 ± 0.5 and 12 ± 1.5); i.e. the relation $\epsilon_\beta(T) = A(v/c)f_1$ cannot be used. Since for these nuclei $A < 0$ and $\mu_n > 0$ it follows that H_{eff} will be negative. For Ir¹⁴⁴ also the nuclear spin relaxation time τ_n in the field H_{eff} was determined. Up to $\sim 0.1^\circ\text{K}$ $\tau_n \ll 70$ sec. $\mu_n \leq 1.7 \pm 0.4$ nuclear magnetons and H_{eff} is also negative. There are 1 figure and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Physicotechnical Institute imeni A. F. Ioffe of the Academy of Sciences USSR). Institute of Nuclear Research of the Academy of Sciences Czechoslovak SSR (M. Shott)

Card 2/3

Asymmetry in β -radiation from some...

S/056/62/043/003/015/063
B102/B104

SUBMITTED: April 13, 1962

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Card 3/3

14 21 21
TITLE: Measurement of the nuclear specific heats of iridium and rhenium in iron alloys

SOURCE: Zhur, ekspr. i teor. fiz. v. 45, no. 2, 1963, 1-7.

TOPIC TAGS: Nuclear specific heat, iridium, rhenium, magnetic moment, effective magnetic field, Re, Ir

ABSTRACT: A method for measuring very small nuclear specific heats and for estimating nuclear relaxation times in alloys is described. The measurements of the nuclear specific heat of iridium and rhenium in iron alloys were made in the effective magnetic field of the Earth. The specific heat of the alloys were measured in a solution of chromium nitrate and 50% glycerin by comparison with the specific heat of a solution of chromium nitrate and 50% glycerin by known specific heats of metallic cobalt and Fe-Co alloys with different concen-

Card 1/42

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ASSOCIATION: AP300001

trations. The nuclear specific heats of Re-Fe and Ir-Fe alloys of various concentrations were measured. The effective magnetic fields acting on the nuclei of the alloying metals were found to be $(6.7 \pm 0.7) \times 10^5$ Oe for Re and $(1.35 \pm 0.1) \times 10^6$ for Ir. The magnetic moment of Ir-192 was found to be (1.8 ± 0.5) nuclear magnetons. The possible errors of the procedure are estimated. The authors wish to thank Yu. M. Burdakov, A. A. Fogel, T. A. Sidorova, and S. A. for assistance in preparing the samples. Orig. art. has: 3 figures, 1 formula, and 2 tables.

ASSOCIATION: Fizicheskoye tekhnicheskoye institut im. A. P. Ioffe Akademii nauk SSSR
(Physicotechnical Inst. Academy of Sciences SSSR)

SUBMITTED: 13Dec62

DATE ACQ: 06Sep63

ENCL: 02

SUB CODE: PH

NO REF SOV: 005

OTHER: 006

Card 2/42

NIKITIN, L.P.; KOGAN, A.V.; KUL'KOV, V.D.; SHIRYAPOV, I.P.

Nuclear heat capacity of FeV alloys. Zhur. eksp. i teor. fiz.
49 no. 4: 1028-1030 0 '65. (MIRA 18:17)

1. Fiziko-tekhnicheskiy Institut imeni Lefee AN SSSR.

L 11963-66 EWT(m)/T/ENP(t)/ENP(b) LIP(c) JD/JG
 Acc No. AP5026589 SOURCE CODE: UR/0056/65/049/004/1028/1030

AUTHORS: Nikitin, L. P.⁵⁵; Kogan, A. V.⁵⁵; Kul'kov, V. D.⁵⁵; Shirypov, I. P.⁵⁵

ORG: Physicotechnical Institute im. A. F. Ioffe, Academy of Sciences SSSR (Fiziko-tehnicheskii institut im. A. F. Ioffe Akademii nauk SSSR) 86 81 3

TITLE: Nuclear specific heat of FeV alloys

SOURCE: Zhurnal eksperimental'noy teoreticheskoy fiziki, v. 49, no. 4, 1965, 1028-1030

TOPIC TAGS: iron alloy, vanadium, specific heat, magnetic moment

ABSTRACT: To determine the hyperfine interaction field acting on the nuclei of vanadium in an iron matrix, the authors measured the nuclear specific heat of iron-vanadium alloys having vanadium concentrations 4.4 and 13.8 atomic per cent. The samples were prepared by melting in an electromagnetic crucible. The specific heat of the alloy was measured in the temperature range 0.03 -- 0.15K by comparison with the specific heat of the cooling salt, the latter being determined experimentally using a control alloy sample of known specific heat. The experimental technique was described by the authors earlier (ZhETF v. 45, 1, 1963), but the apparatus used to measure the nuclear specific heat

Card 1/2

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ACC NR: AP5026589

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was somewhat modified by using pulsed heating instead of audio-frequency heating. The value obtained for the effective field acting on the vanadium nucleus in the alloy with the 4.4 and 13.8 per cent vanadium was 78 ± 7 and 58 ± 4 kOe, respectively. The observed strong dependence of the field on the composition of the alloy is accounted for by means of a simple model, in which the free vanadium atom has three electrons in the unfilled 3d shell and two electrons in the 4s shell. Replacement of a single iron atom by a vanadium atom in the alloy reduces the magnetic moment by 3.2 Bohr magnetons. The localized moment of the vanadium atom in the alloy is estimated to be -0.4 Bohr magnetons. Authors thank Z. V. Guts and L. M. Bugayeva for the preparation and heat treatment of alloys. Orig. art. has: 1 figure and 1 formula.

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SUB CODE: 20/ SUBM DATE: 15Apr65/ NR REF SOV: 003/ OTH REF: 008

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ACC NR: AP7005841

SOURCE CODE: UR/0181/66/008/012/3555/3558

AUTHOR: Kogan, A. V.; Kul'kov, V. D.; Nikitin, L. P.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-
tekhnicheskii institut AN SSSR)

TITLE: Fields of hyperfine interaction for heavy elements dissolved in iron

SOURCE: Fizika tverdogo tela, v. 8, no. 12, 1966, 3555-3558

TOPIC TAGS: heavy nucleus, lutecium, iron, ferromagnetic material, beta radiation,
gamma radiation, specific heat

ABSTRACT: This is a continuation of earlier work by the authors (ZhETF v. 48, 122, 1965 and earlier) devoted to the mechanism producing the internal field acting on nuclei of weakly magnetic elements alloyed with ferromagnets, where the measured the fields of hyperfine interaction from a number of heavy elements alloyed with iron. In the present work they investigated the effective fields for elements with closely-lying atomic numbers, having analogous internal electronic shells but greatly differing external shells. The experiments were made on nuclei of Lu^{177} alloyed with iron, and consisted of measurements of the nuclear component of the specific heat as well as an investigation of the spatial anisotropy of the β and γ radiation of the polarized nuclei. The preparation of the alloy is briefly described. The results show that the internal effective field, determined from the γ -radiation anisotropy, does not exceed 70 kOe. The results are compared with experimental data on the series of

Card 1/2

ACC NR: AP7005841

elements from Lu to Au (Pa, W, Rh, Os, Ir, Pt) in an iron matrix, with an aim at finding an empirical relation for the effective magnetic field as a function of the atomic number. This analysis fails to establish any relation between the effective field and the atomic number on the basis of any presently known theoretical considerations. The authors thank Z. A. Guts for preparing the samples of the Fe-Lu alloys. Orig. art. has: 1 figure, 3 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 04 May 66/ ORIG REF: 006/ OTH REF: 010

Cord 2/2

RADKEVICH, P. YE., EULKOV, V. V., KUZNETSOVA, N.A., SKOROKHATOVA, K. I.
Foxes - Diseases

Treating gastrointestinal diseases of young foxes and minks. Kar. 1. zver. 5 No. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December, 1952, ~~1953~~ Unclassified.